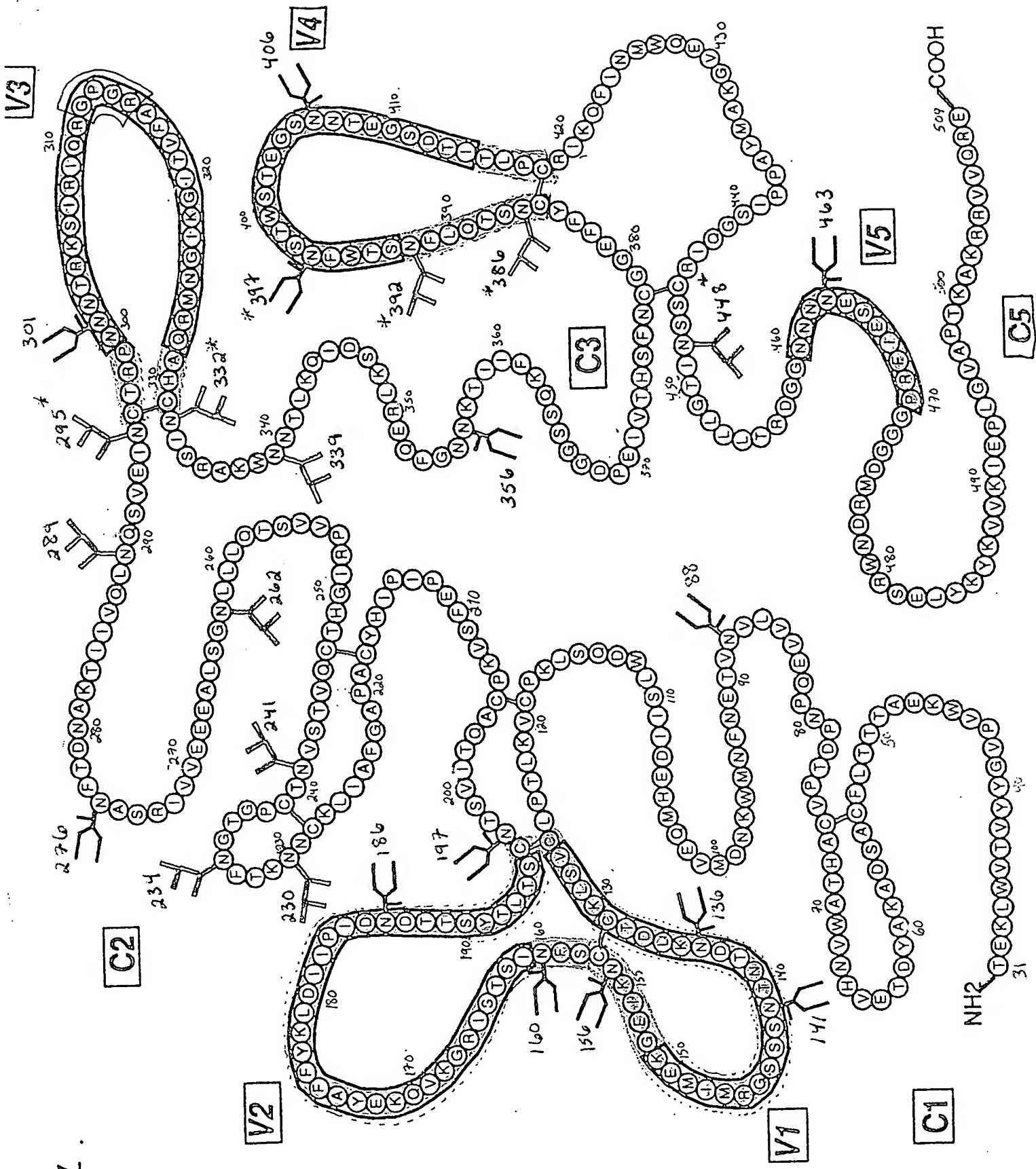


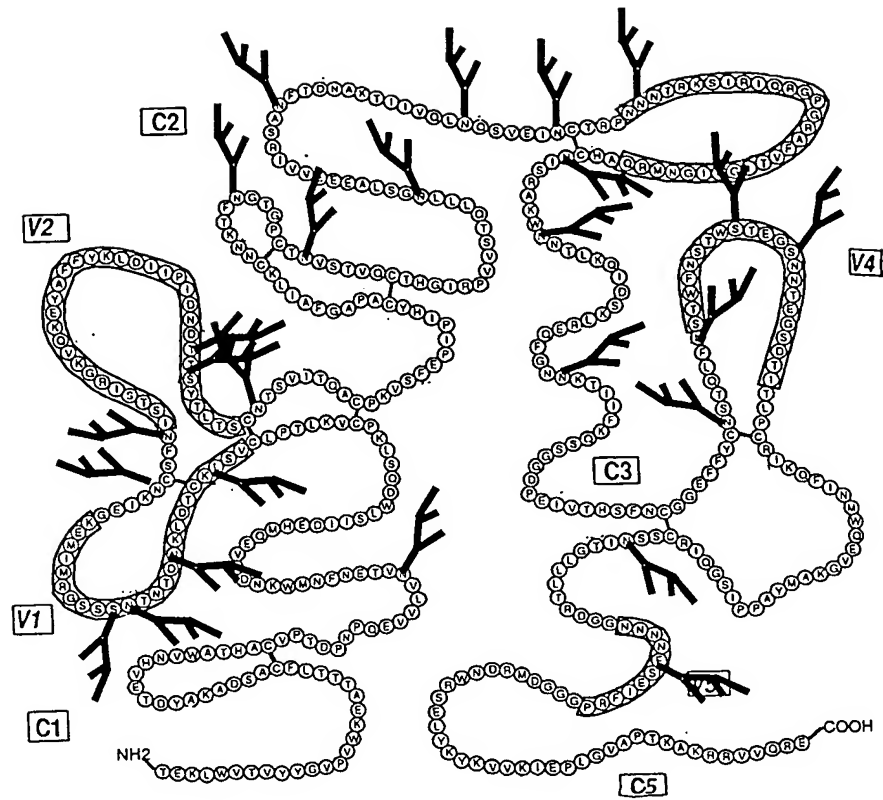
Figure 1.



2612 epitope
 2613 high mannose
 complex

Figure 2

Clade B
NSI



Clade B
SI

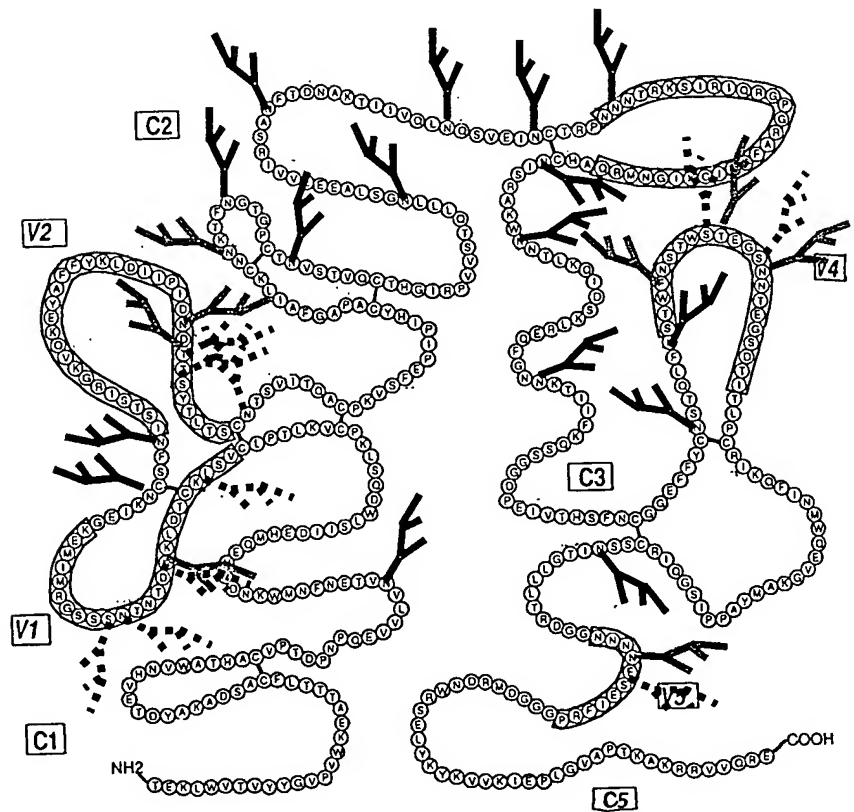
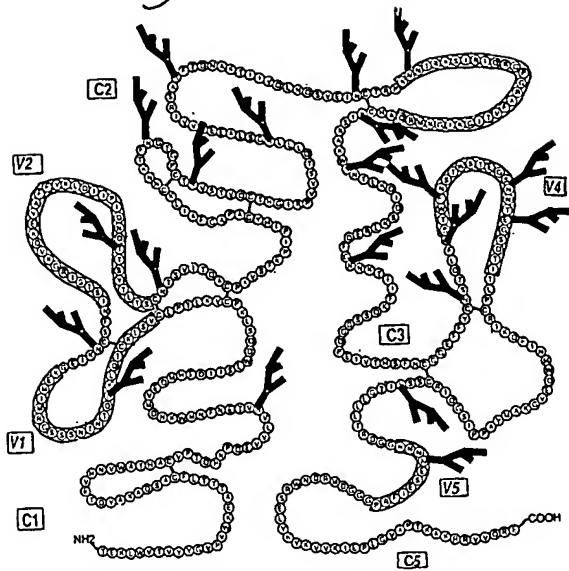
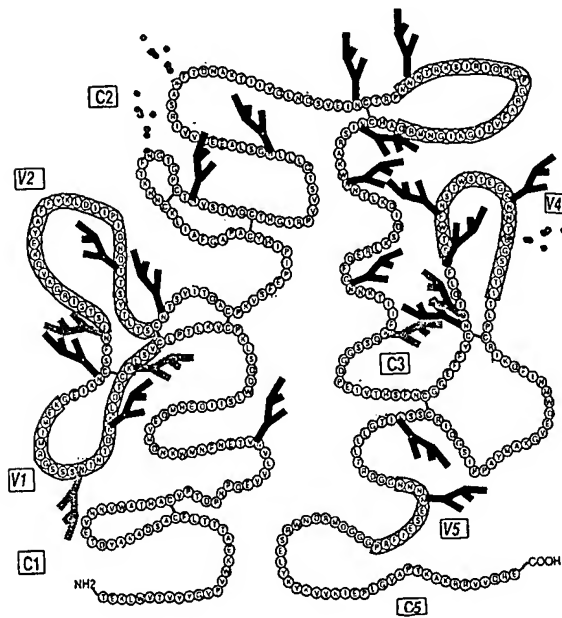


Figure 3



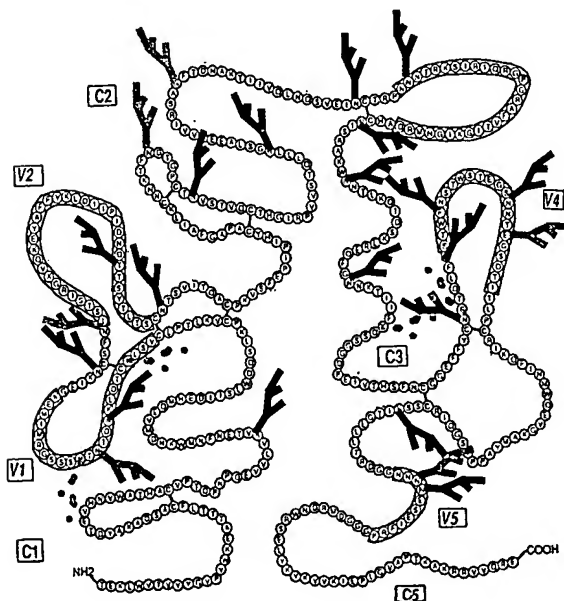
Early

- 21 original sites



Mid

- 5 sites are added
- 3 are removed



Late

- 4 sites are added
- Of the 5 sites added on the mid virus, 4 are now removed

Figure 4

A141 alignment of V1/V2

SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-35-1	.....	T.....	.....	.....	.....	.....	.....	.....
A141-35-2	.....	T.....	.....	.....	.....	.....	.....	S.
A141-35-3	.....	T.....	.....	.....	.....	.....	.....	.....
A141-35-4	.....	T.....	.....	.....	.....R.....	.....	.....	.....
A141-35-10	.....	T.....	.....	.....	.....	.....	.....	S.
A141-35-11	.....	.....	.....	.....	.....	.....	.....	.....
A141-35-12	.....	.....	.....	.....	.....	.....	.....	.....
A141-35-13	.....	.....	.....	.....	.....	.....	.....	.....
A141-35-14	.....	.....	.....	.....	.....	.....	.....	.....

SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-56-1	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-2	.....	.....D.....	.....	N.....	.....	.....	.....	.....
A141-56-3	.....	T.....D.....	.....	.....	.....	.....	.....	.....
A141-56-4	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-5	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-10	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-11	.....	.....D.....	.....	N.....	.....	.....	.....	.....
A141-56-12	.....	.....D.....	.....	N.....	.....	.....	.....	.....
A141-56-13	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-14	.....	T.....	.....	.....	.....	.....	.....	.....

SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-84-1	.....	N.D.R.....	N.S. EGKVE.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-84-2	.....	N.D.R.....	N.S. EGKVE.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-84-3	.....	N.D.R.....	N.S. EGKVE.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-84-4	.....	N.....	T.....	.....	.....	.....	.....	.....
A141-84-5	.....	N.D.R.....	N.S. EGKVE.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-84-6	.....	N.....	N.....	N.....	.....	.....	TS.....	.....
A141-84-7	.....	N.....	T.....	.....	.....	.....	.....	.....
A141-84-8	.....	N.D.R.....	N.S. EGKVE.....	NI.....	D.V.....	.....	PS.RW.....	S.
A141-84-9	.....	N.D.R.....	N.S. EGKVE.....	NI.....	D.V.....	.....	TS.R.....	S.

SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-117-1	.....	N.D.R.....	N.S. EGK.E.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-117-2	.....	N.D.R.....	N.S. EGK.E.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-117-3	.....	N.D.R.....	N.S. EGK.E.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-117-4	.....	N.D.R.....	N.S. EGK.E.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-117-5	.....	N.D.R.....	N.S. EGKVE.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-117-6	.....	.....	.....	.....	.....	.....	.....	.....
A141-117-7	.....	N.D.R.....	N.S. EGK.E.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-117-8	.....	N.D.R.....	N.S. EGK.E.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-117-9	.....	.....	T.....G.....	N.....	.....	.....	.....	.....
A141-117-10	.....	N.....	T.....E.....	.....	.....	.....	.....	.....
A141-117-11	.....	S.K.D.....	D.N.SG RMI.EK.....	NIS.....	D.V.....F.....	I.....	.....R.....	S.
A141-117-12	.....	N.D.R.....	N.S. EGK.E.....	NI.....	D.V.....	.....	TS.R.....	S.
A141-117-13	.....	S.K.D.....	D.N.SG RMI.EK.....	NIS.....	D.V.....F.....	I.....	.....R.....	S.
A141-117-14	.....	.....	D.....	N.....	.....	.....	.....	.....

SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-215-1	.....	.....D.....	.....	N.....	.....	.....	.....	.....
A141-215-2	.....	.....T.....	.....G.....	N.....	.....	.....	.....N.....	.....
A141-215-3	.....	.....D.....	.....	N.....	.....	.....	.....	.....
A141-215-5	.....	.....D.....	.....	N.....	.....	.....	.....	.....
A141-215-12	.....	.....D.....	.....	N.....	.....	.....	.....	.....
A141-215-13	.....	.....T.....	.....G.....	N.....	.....	.....	.....N.....	.....
A141-215-14	.....	.....T.....	.....G.....	N.....	.....	.....	.....N.....	.....
A141-215-15	.....	.....D.....	.....	N.....	.....	.....	.....	.....

Figure 5

A141 alignment of V4

SF162	CNSTQLFN	----	STWNN	----	TIGPNT	NG	----	TITLPC
A141-35-1
A141-35-2		R	.....
A141-35-3
A141-35-4
A141-35-10
A141-35-11
A141-35-12
A141-35-13
A141-35-14

SF162	CNSTQLFN	----	STWNN	----	TIGPNT	NG	----	TITLPC
A141-56-1
A141-56-2
A141-56-3
A141-56-4
A141-56-5
A141-56-10
A141-56-11
A141-56-12
A141-56-13
A141-56-14

SF162	CNSTQLFN	----	STWNN	----	TIGPNT	NG	----	TITLPC				
A141-84-1	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-84-2	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-84-3	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-84-4											
A141-84-5	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-84-6	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-84-7											
A141-84-8											
A141-84-9	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....

SF162	CNSTQLFN	----	STWNN	----	TIGPNT	NG	----	TITLPC				
A141-117-1	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-117-2	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-117-3	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-117-4	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-117-5	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-117-6											
A141-117-7	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-117-8	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-117-9				S	.....					
A141-117-10											
A141-117-11				F	S	TWS	E	S	.....	E	SD
A141-117-12	ST	WMFN	.....	D	.....	KES	D	E	.....	N	.....
A141-117-13				F	S	TWS	E	S	.....	E	SD
A141-117-14											

SF162	CNSTQLFN	----	STWNN	----	TIGPNT	NG	----	TITLPC
A141-215-1
A141-215-2		E	.....
A141-215-3
A141-215-5
A141-215-12
A141-215-13
A141-215-14
A141-215-15